

REMARKS

Claims 1-19 are pending in the present application. Claims 1-2, 7-8 and 12-13 have been amended.

Applicant respectfully requests reconsideration of the application in view of the foregoing amendments and the remarks appearing below.

Rejection Under 35 U.S.C. § 103

The Examiner has rejected claims 1-19 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,624,660 to Li et al. in view of U.S. Patent No. 6,473,282 to Lin et al., stating that Li et al. disclose all of the elements of these claims except isolating a sea of gates. The Examiner then asserts that in view of Lin et al. it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Li et al. solution by adding the sea of gates according to Lin et al. Applicant respectfully disagrees.

In basic terms, Applicant's invention consists of a latchup control isolation network and/or an active clamp network, each of which (a) are electrically coupled to a substrate and/or a well on said substrate, and (b) detect overshoot and undershoot signals (i.e., latchup pulses) on the power supply voltage potential and ground substrate voltage potential. When either of said voltage potentials are greater than or less than certain predetermined values, the network isolates a sea of gates from the power rail, thereby preventing latchup.

Li et al. disclose a mixed off-chip driver network for detecting a signal on an input node, i.e., when an input signal exceeds the power supply voltages, a well-bias network detects a signal (e.g., a latchup pulse) on the signal pins. The invention disclosed by Li et al. relates to a signal-pin only detection method and Li et al. do not disclose or suggest a method or apparatus for detecting overshoot signals on the power supply voltage or undershoot signals on the ground substrate potential. Additionally, the apparatus and method disclosed by Li et al. is specific to a given off-chip driver network and would generally not be applicable to any CMOS circuit. In other words, the invention disclosed by Li et al cannot be applied to all circuit networks applications since it is only relevant only to off-chip driver circuits for detecting a signal on a signal pin. Although Li et al. does have a substrate and a V_{DD} , Li et al. do not disclose or suggest a detection network for the substrate and the V_{DD} potential variations. Additionally, although the examiner claims that Li et al. disclose a network that "isolates the circuit from the power supply" and comprises an "active clamp" network, no such statements or references appear to exist in the

Li et al. patent and structure providing such function is not apparent to Applicant. Support for this statement is respectfully requested. In any event, signals applied to any "active clamp" network in the Li et al. patent do not originate from the well and substrate contacts. Accordingly, Li et al. do not disclose or suggest the subject matter of Applicant's application.

Lin et al. address the sequencing of two power supply voltages, V_{DD1} and V_{DD2} , and switching between such power supplies. Lin et al. do not teach or suggest the complete decoupling of a network from a power supply voltage or establishing a "floating state" separation from the power supply voltage. Additionally, Lin et al. do not address latchup events from substrate or well perturbations. Accordingly, Lin et al. do not disclose or suggest the subject matter of Applicant's application.

In rejecting claims under 35 U.S.C. § 103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073 (Fed. Cir. 1988). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266 (Fed. Cir. 1992). A showing of suggestion, teaching or motivation to combine references is an "essential evidentiary component of an obviousness holding." C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." See In re Dembiczak, 175 F.3d 994, 1000 (Fed. Cir. 1999).

The Office Action alleges that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Li et al. solution by adding the sea of gates according to Lin et al., because as well known in the art, in modern electronics the circuit block include plurality of gates; so that the latchup protection circuit should being able to isolate the whole block with plurality of gates." A factual inquiry whether to modify a reference must be based on objective evidence of record, not merely conclusory statements of the Examiner. See, In re Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002). The reasons given by the Examiner in this case are nothing more than broad conclusory statements and are not "evidence" of proper motivation to combine these two references. Accordingly, the Office Action fails to make out a *prima facie* case of obviousness of the claimed invention.

Furthermore, even if the references are combinable, which they are not, neither applied reference discloses or suggests a motivation for combining them so as to suggest Applicant's claimed invention. The Li et al. invention relates solely to an off-chip driver network for detecting a signal on a signal pin, while the Lin et al. invention relates solely to switching/sequencing between a first and second power supply, without any decoupling or isolation of the power supply. These references are directed to entirely different inventive concepts and so it is not surprising that there is no suggestion or motivation to combine the references so as to achieve the invention of claims 1-19.

Finally, Applicant has amended independent claims 1, 7 and 12 and dependant claims 2, 8 and 13 to clarify that (a) the latchup control isolation network and/or an active clamp network are electrically coupled to a substrate and/or a well on said substrate, and (b) Applicant's invention electrically isolates a sea of gates from a power rail in response to latchup events on said substrate and/or said well. These changes have been made to enhance the description of Applicant's invention, and not for reasons of patentability.

For at least these reasons, Applicants respectfully traverses the obviousness-type rejection, and requests favorable reconsideration.

CONCLUSION

In view of the foregoing, Applicant submits that claims 1-19, as amended, are in condition for allowance. Therefore, prompt issuance of a Notice of Allowance is respectfully solicited. If any issues remain, the Examiner is encouraged to call the undersigned attorney at the number listed below.

Respectfully submitted,

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